AMENDMENTS TO THE CLAIMS

1. (currently amended) An illuminator comprising an array of a plurality of light sources mounted in a plurality of cavities in a substrate, and an electrical drive circuit, wherein the substrate comprises an electrically insulating body plated with plural conductors for the drive circuit.

2. (currently amended) An illuminator as claimed in claim 1, wherein the ~~substrate~~ electrically insulating body is of a circuit board material.

3. (currently amended) An illuminator as ~~claimed~~ in claim 2, wherein the ~~substrate~~ electrically insulating body is of FR4 material.

4. (currently amended) An illuminator as ~~claimed~~ in ~~any preceding claim~~ Claim 1, wherein the plural conductors extend into the plural cavities, whereby ~~to also~~ said plural conductors act as reflective coatings on the plural cavity walls.

5. (currently amended) An illuminator as claimed in claim 4, wherein the plural conductors extend underneath the light sources.

6. (currently amended) An illuminator as claimed in ~~any preceding claim~~ Claim 1, wherein the plural light sources ~~are~~ comprise bare semiconductor dies.

7. (currently amended) An illuminator comprising an array of a plurality of light sources mounted in a plurality of cavities in a substrate, an electrical drive circuit, wherein the substrate comprises an electrically insulating body plated with plural conductors for the drive circuit, ~~as claimed in any preceding claim, wherein the illuminator further comprises~~ and a thermally conductive structure under the plural light sources.

8. (currently amended) An illuminator as claimed in claim 7, wherein the thermally conduct~~ing~~ive structure comprises a plurality of layers bonded to a surface of the substrate body.

9. (currently amended) An illuminator as claimed in claim 8, wherein the thermally conductive structure comprises a at least one heat spreader in direct contact with a plating under a light source.

10. (original) An illuminator as claimed in claim 9, wherein the heat spreader comprises a metal plating patterned onto the substrate under each cavity.

11. (currently amended) An illuminator as claimed in claim ~~10~~9, wherein heat spreader comprises a plurality of metal coatings patterned onto the substrate, one under the other.

12. (currently amended) An illuminator as claimed in ~~any of claims 9 to 11~~ Claim 9, wherein ~~there is~~ the at least one heat spreader comprises one heat spreader per light source.

13. (currently amended) An illuminator as claimed in ~~any of claims~~ Claim 7 ~~to 12~~, wherein the thermally conducting structure comprises a global thermally conducting layer underneath all of the cavities.

14. (original) An illuminator as claimed in claim 13, wherein said global layer comprises a resin embedded with thermally conductive particles.

15. (original) An illuminator as claimed in claim 14, wherein the particles are of diamond material.

16. (original) An illuminator as claimed in claim 14, wherein the particles are of a ceramic material.

17. (new) An illuminator as claimed in Claim 16 wherein the ceramic material is Boron Nitride.

~~17.~~18. (currently amended) An illuminator as claimed in ~~any of claims~~ Claim 13 ~~to 16~~, wherein the thermally conductive structure further comprises a heat sink bonded to the globally conducting layer.

19. (new) An illuminator as claimed in claim 7, wherein the electrically insulating body is of a circuit board material.

20. (new) An illuminator as in claim 19, wherein the electrically insulating body is of FR4 material.

21. (new) An illuminator as in Claim 7, wherein the plural conductors extend into the plural cavities, whereby said plural conductors act as reflective coatings on the plural cavity walls.

22. (new) An illuminator as claimed in claim 21, wherein the plural conductors extend underneath the light sources.

23. (new) An illuminator as claimed in Claim 7, wherein the plural light sources comprise bare semiconductor dies.

~~18.~~24. (currently amended) A method of producing an illuminator comprising the step of:

providing a substrate body of insulating material,

completing a substrate by plating the body with an electrically conductive plating;

forming an array of cavities in the substrate at a top side, the cavities having a shape for desired light reflection; and

placing a light source in each cavity.

~~19.~~25. (currently amended) A method as claimed in claim ~~18~~24, wherein the plating of the substrate is patterned after the cavity-forming step to both provide the drive circuit and optically reflective coatings on the walls of the cavities.

~~20.~~26. (currently amended) A method as claimed in claims ~~18 or 19~~24, wherein the substrate is plated with metal on an underside, and each cavity is formed through the full depth of the substrate body to expose the plating on the underside.

~~21.~~27. (currently amended) A method as claimed in ~~any of claims~~ Claim ~~18~~ 24~~to 20~~, wherein the cavities are formed by drilling.

~~22.~~28. (currently amended) A method as claimed in ~~any of claims~~ Claim 25~~18 to 21~~, comprising the further steps of applying a thermally conductive structure to the underside of the substrate.

~~23.~~29. (currently amended) A method as claimed in ~~claims 21 or 22~~Claim 28, wherein the thermally conductive structure is applied to the platings under the cavities and exposed substrate surfaces therebetween.

~~24.~~30. (currently amended) A method as claimed in claim 2~~3~~9, wherein an additional metal layer is applied to the platings before application of the thermally conductive structure.

~~25.~~31. (currently amended) A method as claimed in ~~claims 22 to 24~~Claim 29, wherein the thermally conductive structure comprises a layer of resin impregnated with thermally conductive particles.

~~26.~~32. (currently amended) A method as claimed in claim ~~25~~31, wherein a heat sink is applied to said layer.

~~27.~~33. (currently amended) A method as claimed in ~~any of claim 26~~Claim 32, wherein the heat sink and the resin layer are applied with use of adhesives and pressing.